

Work Order ID 74191RH



Page 1

Tuesday, September 27, 2011 10:08:44 AM

Item ID: D206-642-151

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: MF

Date: 11-09-27

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3804	A								
IIN-D206-642	O								
100		0.00							
	DOCUMENT CONTROL								
DC	Memo	0.00							
Document Control	Photocopy bluefile & type labels per PPP D206-642-151		CHG001						

N/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Deburr Fwd edge of tube

2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804

3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required.

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch

A/R ☐ Aluminum Rod ☐ M117884

4-Grind weld flush to cap on top surface only.

5-Cut Aft end as per dwg D3804 from front of tube and Deburr

6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804

7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.

8-Drill pilot holes using Dt8166 & DT8169D & DT9771.

9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.

10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.

SAO 11-10-05

DC 11/10/13

SAO 11-10-14

DP 11-10-27

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\_\_\_\_\_

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**Accept**

\_\_\_\_\_

**Setup Start**

**Stop**

**Abstract**

**Cust Item ID:**[illegible]

**Customer:**

**Reference:**

Run Start

**Stop**

**Insp.  
Stamp**

11-10-27  
 Attach them to

> OK w/10/28

11 10 28 ①

\_\_\_\_\_

QC

## Quality Control

QC6- Inspect dimensions to drawing

0.00

## Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Customer:

Reference:

Run Start



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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Chemical Conversion Coat per QSI005 4.1	0.00							
	HandFinish	0.00							
	Hand Finishing								
150	QC3- Inspect Part Finish	0.00							
	QC	0.00							
	Quality Control								
160	Skidtubes	0.00							
	Skidtubes	0.00							
	Skidtubes								
	1-Open holes to finished size as per Dwg D3804, (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								

DL 11/10/28

1 0 86 11/10/28

11/10/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

1 0 BE 11/10/08

180

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

BE 11/10/08

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12

Hrs. cure time before cutting

Start Date: ☒ 11-10-28 Time: ☒ 3h30

Finish Date: ☒ 11-10-31 Time: ☒ 11:00

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch

A/R ☐ Sikaflex-291 ☐ 5119399 ☐

Sikaflex expire date: ☐ 12-08-13

SAD 11-10-28 (2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**Work Order ID 74191**

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Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

RD

11-10-31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Setup Start



Revision ID:

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Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

200

0.00



Skidtubes

Skidtubes

Skidtubes

## Memo

0.00

1-remove alodine from around hole and prepare for welding

BE 11/10/31

2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch

A/R ☐ Aluminum Rod ☐

1117884

BE 11/10/31

3-Grind welds flush as per Dwg D3804.

B 11/11/02

4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required.

A/R ☐ SS Rod ☐

NONE

BE 11/11/01

5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr

DD 11-11-2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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**Work Order ID 74191**

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Item Name: Replacement Skidtube

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Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210  HandFinish Hand Finishing	HandFinishing  Memo Install D2680-041 Nut Plate as per Dwg D3804	0.00  0.00							
			DP	11-11-2					
215  QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds  Memo	0.00  0.00							
			PA	11.11.03					
220  QC Quality Control	QC10- Inspect visual per QSI004- ground welds  Memo	0.00  0.00							
				11.11.03		1	0		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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# Work Order ID 74191

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Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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230

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

11-11-03 ①

240

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

1 BR 11-11-4

250

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

1:45  
320°F  
2:15

IX 0 M-11/11/07

M118434

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Work Order ID 74191 RM

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Item ID: D206-642-151

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Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 10/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 11/4/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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260

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 RH of 14 u/u/o e

270

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.

1 RH of 14 u/u/o e

W/O:		WORK ORDER CHANGES					
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Cust Item ID:

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

280

0.00



HandFinish

HandFinishing

Memo

0.00

Hand Finishing

1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive

A/R ☐ Sikaflex-291 ☐ 1119443

Sikaflex expire date: ☐ 12101

2- Install wearplate as per dwg

2-Wing Walk as per Dwg D3804 and QSI 005 4.4 ☐

Batch: 1118988

124 6 11 11/09

290

0.00



QC

QC3- Inspect Part Finish

Memo

0.00

Quality Control

8 11/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

300

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

*8 u/u/10*

310

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D206-642-151

Location:

PPP Rev:

*PPP 74360*

*10/11/10*

320

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

*11/11/11*

*MF 11-11-10*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



# Picklist Print

Tuesday, September 27, 2011 10:08:40 AM

Page 1

Work Order ID: 74191

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011


Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC IPP  
REV:B 11.09.16 PER IIN REV.O DD VERF:EC


Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2620  Skidtube, 206 Skidtube		Manufactured	No			110	Each	23.0000	1	1			
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SAD 11-10-05


Location Loc Qty Loc Code

LG	23	
71616	5	732 84
71617	6	
73781	5	
73786	3	
73787	4	

D2647  Cap		Manufactured	No			110	Each	36.0000	1	1			
---------------------------------------------------------------------------------------------------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

Location Loc Qty Loc Code

LG002	36	
55352	8	
71171	28	

CR3212-4-04  Cherry Rivet		Purchased	No			180	Each	10,997.00	52	52			
--------------------------------------------------------------------------------------------------------------------	--	-----------	----	--	--	-----	------	-----------	----	----	--	--	--

BE 11/19/11  
B 73826 ✓

Location Loc Qty Loc Code

ST311	997	
116471	78	
117816	179	
118686	1	
118840	739	
ST516	10000	
119017	10000	52

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, September 27, 2011 10:08:40 AM

Page 2

Work Order ID: 74191

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2654-1  
  
 Web

Manufactured No 180 Each 12.0000 1 1



SAD 11-10-28

Location Loc Qty Loc Code

LG 12  
 73789 10  
 73790 2

B73798

①

D3286-1  
  
 Doubler


Manufactured No 180 Each 80.0000 2



Location Loc Qty Loc Code

LG002 74441 80  
 64563 6  
 74111 74

② DP 11-10-22

D2649  
  
 Cross Bolt Spacer

Manufactured No 200 Each 2,019.000 19 19



BE 11/10/31

Location Loc Qty Loc Code

LG 736  
 68224 2  
 71355 2  
 72704 2  
 72841 130  
 73855 600  
 LG001 1283  
 65317 1  
 68507 11  
 73390 71  
 73857 600  
 73860 600

19

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, September 27, 2011 10:08:40 AM

Work Order ID: 74191

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D3286-3 Manufactured No 200 Each 98.0000  
Spacer

2 2

BE 10/11/01  
B 74439 x2

Location	Loc Qty	Loc Code
LG001	83	
74117	83	
LG002	15	
64564	15	

D2680-041 Manufactured No 210 Each 40.0000  
Nut Plate

1 1

Location	Loc Qty	Loc Code
LG 73854	40	
73334	40	

① DP 11-11-2

CR3212-4-03 Purchased No 210 Each 2,116.000  
Cherry Rivet

2 2

Location	Loc Qty	Loc Code
FP-B	2	
110139	2	
ST311	1114	
114859	1114	
ST318	1000	
119017	1000	

② DP 11-11-2

AN960JD416 NAS1149D0463J Purchased No 210 Each 0.0000  
Washer

1 1

M118384 (x1) M u (x108)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, September 27, 2011 10:08:40 AM

Work Order ID: 74191

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

210

Each

1,401.000

2

2



Cherry Rivet

Location

Loc Qty

Loc Code

FP-B

2

113973

2

ST311

399

117086

21

117849

378

ST317

1000

119017

1000

② 11-11-2

MS27039-4-06

Purchased

No

210

Each

29.0000

1

1



Screw

Location

Loc Qty

Loc Code

FP-A

8

115460

8

ST292

21

115460

21

1119124

21

D2651-1

Manufactured

No

270

Each

289.0000

6

6



Plug

Location

Loc Qty

Loc Code

fpa

109

69018

109

FP-A

180

57869

1

66445

10

67760

36

70691

100

70839

2

71037

31

B73827

26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Tuesday, September 27, 2011 10:08:40 AM

Work Order ID: 74191



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2651-3

Manufactured No

270

Each

1,799.000

6

6



O-Ring



*M* *u/u/u/o/g*

Location

Loc Qty

Loc Code

FP-A

1799

61962

12

66956

282

73489

505

73828

1000

*x6*

D3873-1

Manufactured No

280

Each

599.0000

14

14



Bushing



*M* *u/u/u/o/g*

Location

Loc Qty

Loc Code

ST084

4

68247

4

ST088

595

64760

1

70690

47

71837

87

73399

60

73829

400

*1373830*

*x14*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

Tuesday, September 27, 2011 10:08:40 AM

Work Order ID: 74191

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

D2646

Manufactured No

280 Each

87.0000 1 1



Aft Cap



XL 11/1/08

Location

Loc Qty

Loc Code

FP004

43

B73294

XL

68280

43

FP006

5

62678

5

FP-4

35

70945

1

71070

34

fp5

4

71038

4

D3805-041

Manufactured No

280 Each

0.0000 1 1



Wearplate Assembly Fwd, Low Gear



B74892 (X1) XL 11/1/09

MS27039-1-08

Purchased No

280 Each

1,216.000 2 2



XL 11/1/08

Screw

Location

Loc Qty

Loc Code

ST291

1216

115108

16

117423

300

118378

400

118910

500

XZ

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, September 27, 2011 10:08:41 AM

Work Order ID: 74191

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

MS21042L3

Purchased

No

280

Each

8,411.000

7

7



Nut

\*



ul ulul08

Location

Loc Qty

Loc Code

ST300

2411

117441

16

117601

240

117885

155

118451

1000

118927

1000

X7

ST516

6000

119017

6000

D3805-045

Manufactured

No

280

Each

6.0000

1

1



Wearplate Assembly Aft, Low Gear

\*



1373819 (x1) ul ulul08

Location

Loc Qty

Loc Code

FP

6

70878

6

AN960JD10L

NAS1149D0332J

Purchased

No

280

Each

0.0000

2

2



Washer

\*



ul 117087 (x2) ul ulul08

AN3-37A

Purchased

No

280

Each

261.0000

7

7



Bolt



ul ulul08

Location

Loc Qty

Loc Code

ST353

211

111668

111

118628

100

ST354

50

X7

117619

50

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, September 27, 2011 10:08:41 AM

Page 8

Work Order ID: 74191



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 10/3/2011

Required Date: 11/4/2011

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0363J

Purchased

No

280

Each

4,404.000

7

7



Washer



*M 4/4/08*

Location

Loc Qty

Loc Code

ST298

4404

117601

274

118077

1130

118612

1000

118968

2000

*x7*

Tuesday, September 27, 2011 10:08:41 AM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

#### NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

# 74191

**RELEASED**  
CP 09-07-03  
per ECN 09-538

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	99	DART AEROSPACE USA, INC	
DRAWN	99	PORT HADLOCK, WA	
CHECKED	99	DRAWING NO.	REV. A
MFG. APPR.	99	D3804	SHEET 1 OF 5
APPROVED	99	TITLE	SCALE
DE APPR.	99	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

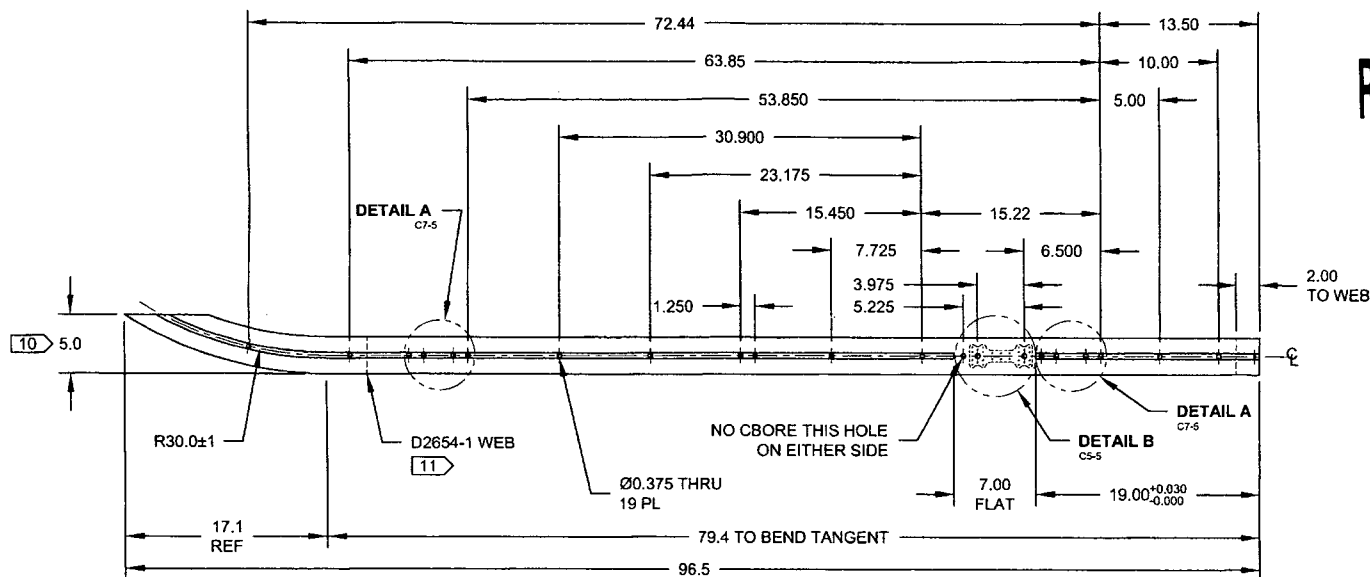
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

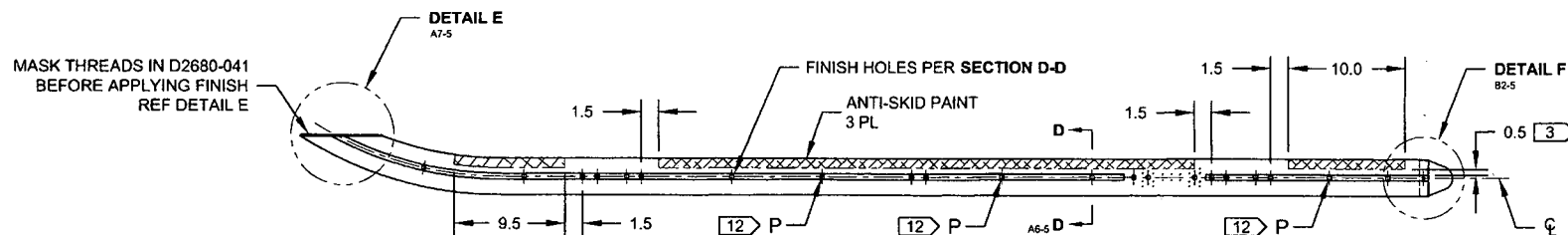
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

RELEASED  
09.03.03



**D3804-041 BENDING/DRILLING DETAIL**



**D3804-041 ASSEMBLY/FINISHING DETAIL**

DESIGN	93	<b>DART AEROSPACE USA, INC</b>	
DRAWN	93	PORT HADLOCK, WA	
CHECKED	93	DRAWING NO.	REV. A
MFG. APPR.	93	D3804	SHEET 2 OF 5
APPROVED	93	TITLE	SCALE
DE APPR.	93	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

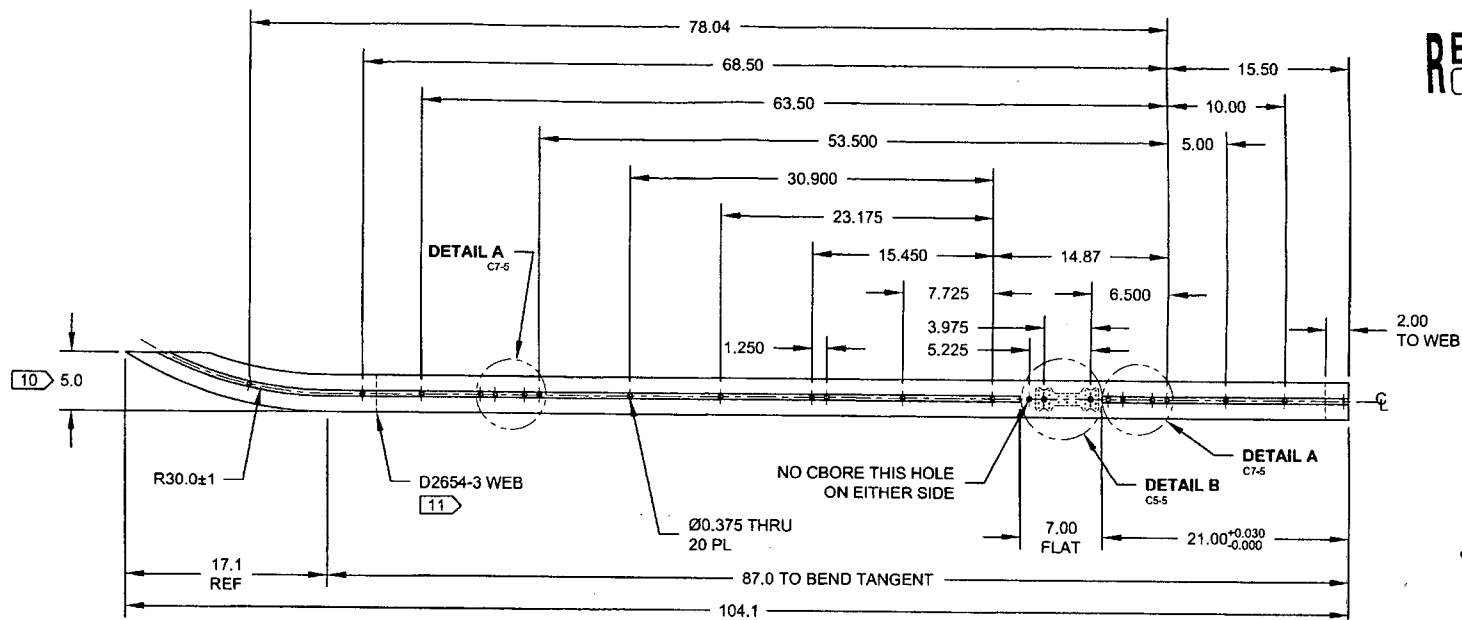
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

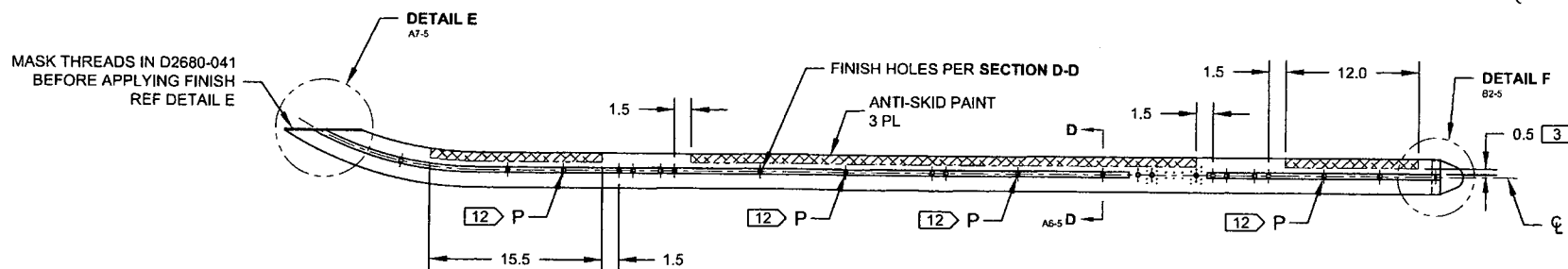
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

RELEASED  
09-03-03



**D3804-043 BENDING/DRILLING DETAIL**



**D3804-043 ASSEMBLY/FINISHING DETAIL**

DESIGN	97	DART AEROSPACE USA, INC	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 3 OF 5
APPROVED	97	TITLE	SCALE
DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC	
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# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

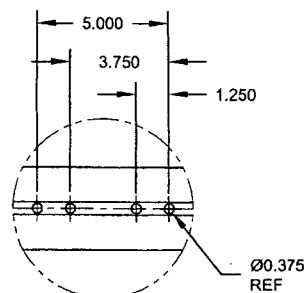
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

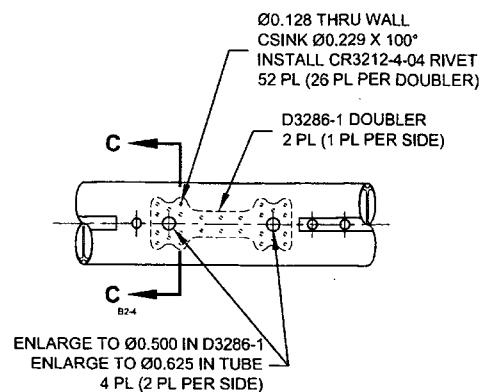
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

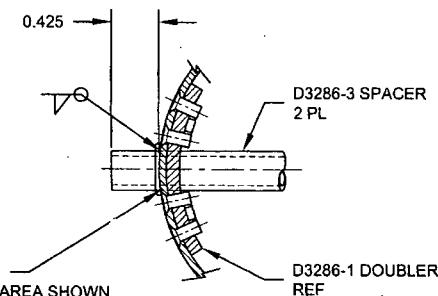
RELEASED  
09.03.03



**DETAIL A** D6-2  
C2-2  
D6-3  
C2-3  
SCALE NONE

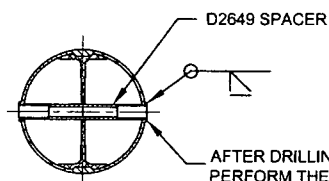


**DETAIL B** C3-2  
C3-3  
SCALE NONE



- TO INSTALL D3286-1/-3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
  2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
  3. ENLARGE HOLES IN D3286-1 TO Ø0.500
  4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
  5. RIVET D3286-1 TO TUBE
  6. INSERT D3286-3 SPACER
  7. WELD IN PLACE AND GRIND FLUSH

**SECTION C-C** C6-4  
PARTIAL SECTION  
SCALE NONE



- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. CBORE TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

**SECTION D-D** A4-2  
A4-3  
FOR Ø0.375 HOLES ONLY  
SCALE NONE

DESIGN	93	<b>DART AEROSPACE USA, INC</b>	
DRAWN	J	PORT HADLOCK, WA	
CHECKED	93	DRAWING NO.	REV. A
MFG. APPR.	E	D3804	SHEET 4 OF 5
APPROVED	93	TITLE	SCALE
DE APPR.	H	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCIALIZED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

X 7491

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

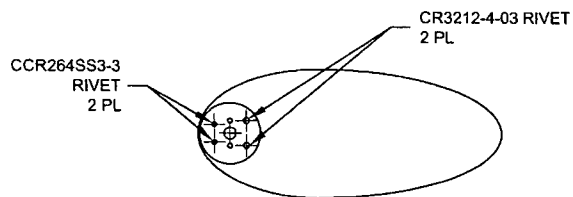
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

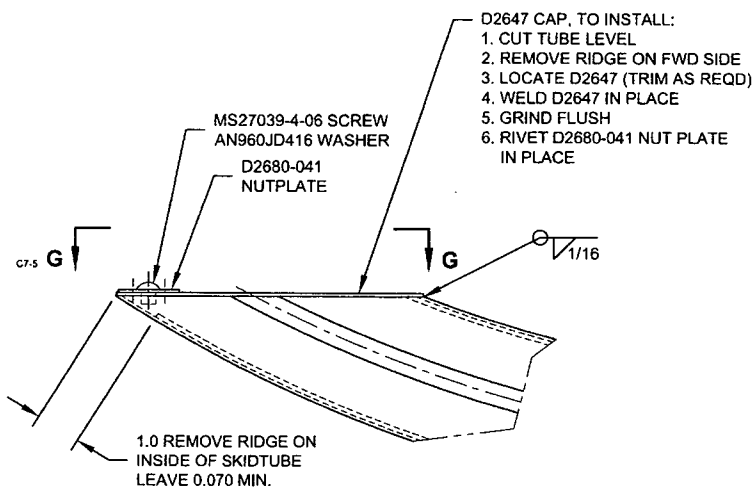
**NOTE:** Date & initial all entries



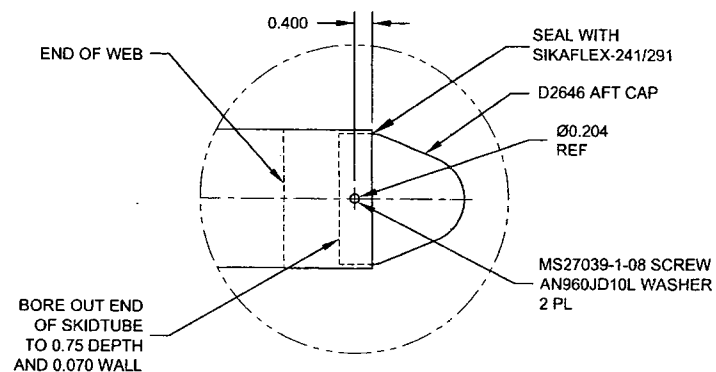
RELEASED  
97 09.03.03



**VIEW G-G**  
SCALE NONE A7-5



**DETAIL E**  
SCALE NONE B7-2 B7-3



**DETAIL F**  
SCALE NONE B2-2 B2-3

#74191

DESIGN	97	<b>DART AEROSPACE USA, INC</b>	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO. D3804	REV. A
MFG. APPR.	97	SHEET 5 OF 5	
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DE APPR.	97	SKIDTUBE ASSEMBLY, 206A/B	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries